Case Study

Amiad supplies filters to Texas Township, Michigan, USA, to block invasive zebra mussels species and provide flood relief to residents of properties near lakes.

Background

Historically, Texas Township has had many lakes and wetlands that collect runoff during storms but does not have a history of significant flooding. Due to heavy snow and rainfall over the last two years, the water levels in Crooked Lake and Eagle Lake rose over two feet above normal and to the point of flooding the houses around the lakes. The water levels also interrupted the ground water table level, so even properties that are not in the immediate vicinity of those lakes are being flooded.
The lakes have no drain and therefore pumping water was needed to lower the lake water level. The Department of Environmental Quality in Michigan authorized pumping the water into the nearby Bass Lake only after a filtration system is installed to prevent any invasive species, such as zebra mussel larvae, from crossing into Bass Lake. Amiad has a long experience of dealing with invasive species with many installations in the USA and across the globe that proved the success of Amiad’s technology in preventing propagation of invasive species and protecting water systems’ infrastructures. This convinced Texas Township to contact Amiad to provide the necessary filtration solution.

The Challenge

Amiad was challenged with providing a high flow rate filtration solution capable of low filtration degree for the removal of zebra mussels and larvae before the beginning of the rainy season to mitigate the risk of further flooding and damage to infrastructure and private properties. The filtration system had to offer “plug and play” features and be available in the shortest time possible. Flexibility of installation was also critical considering that no preexisting plumbing infrastructure was available. Filtration is an ideal solution for removing the veliger phases of the mussels, which range in size from approximately 80 to 400 micron.

The Solution

Amiad considered which filtration solution would best meet the requirements presented in this particular situation and decided on its EBS screen filter with the following technical properties:

<table>
<thead>
<tr>
<th>Flow rate</th>
<th>1500 gpm; 340 m3/h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating pressure</td>
<td>40 psi; 2.75 bar</td>
</tr>
<tr>
<td>Filtration degree</td>
<td>40 micron</td>
</tr>
<tr>
<td>Filtration solution</td>
<td>4 x 10” EBS 10K SLN on 2 separate skids</td>
</tr>
</tbody>
</table>
The primary advantage of this system is represented by the filtration degree provided at the requested flow rate. Amiad’s EBS screen filter has an outstanding record with many successful installations done over the past 25 years. The Amiad EBS screen filter provides one of the largest filtration areas in the market that, combined with a reliable electric self-cleaning mechanism, makes it the ideal solution for filtration of high-flow and poor quality water to very fine filtration degrees.

Amiad USA designed a custom skid-mounted solution that combines quick installation and commissioning with a reduced footprint to ensure the filtration system can be made operational in the shortest time possible. Amiad was very sensitive to the pressing nature of the project. The entire team, from the Israeli production department to the shop floor putting the skid together, joined forces to deliver the product early to serve the needs of the community.

The Result

The system was just recently commissioned. The start-up and commissioning process were flawless, to the relief and joy of the population of the Texas Township that are waiting for a resolution to this crisis.

Read more in the article published on MLive [http://s.mlive.com/KR0TwEb]
For additional information, please contact us at infousa@amiad.com